



Individual actual or perceived property flood risk: Did it predict evacuation from Hurricane Isabel in North Carolina, 2003?

Author(s): Horney JA, Macdonald PD, Van Willigen M, Berke PR, Kaufman JS
Year: 2010
Journal: Risk Analysis : An Official Publication of The Society for Risk Analysis. 30 (3): 501-511

Abstract:

Individual perception of risk has consistently been considered an important determinant of hurricane evacuation in published studies and reviews. Adequate risk assessment is informed by environmental and social cues, as well as evacuation intentions and past disaster experience. This cross-sectional study measured perceived flood risk of 570 residents of three coastal North Carolina counties, compared their perception with actual risk determined by updated flood plain maps, and determined if either was associated with evacuation from Hurricane Isabel in 2003. Census blocks were stratified by flood zone and 30 census blocks were randomly selected from each flood zone. Seven interviews were conducted at random locations within selected blocks. Bivariate and multivariable analyses were conducted to produce crude and adjusted risk differences. Neither the designated flood zone of the parcel where the home was located nor the residents' perceived flood risk was associated with evacuation from Hurricane Isabel in the bivariate analysis. In the multivariable analysis, intention to evacuate and home type were important confounders of the association between actual risk and evacuation. The belief that one is at high risk of property damage or injury is important in evacuation decision making. However, in this study, while coastal residents' perceived risk of flooding was correlated with their actual flood risk, neither was associated with evacuation. These findings provide important opportunities for education and intervention by policymakers and authorities to improve hurricane evacuation rates and raise flood risk awareness.

Source: <http://dx.doi.org/10.1111/j.1539-6924.2009.01341.x>

Resource Description

Communication:

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience:

audience to whom the resource is directed

Policymaker, Public

Early Warning System:

Climate Change and Human Health Literature Portal

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

A focus of content

Exposure :

weather or climate related pathway by which climate change affects health

Extreme Weather Event, Human Conflict/Displacement

Extreme Weather Event: Flooding, Hurricanes/Cyclones

Geographic Feature:

resource focuses on specific type of geography

Ocean/Coastal

Geographic Location:

resource focuses on specific location

United States

Health Impact:

specification of health effect or disease related to climate change exposure

Injury

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Other Vulnerable Population: People living in flood plains

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment:

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content